

Homework Assignment 3

Due Date: 4/30//2023

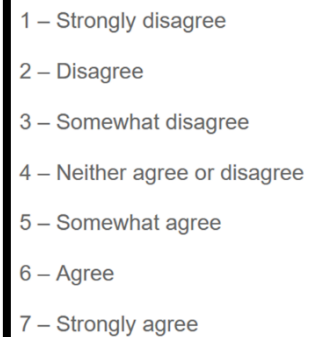
For each of the following hypothesis, write up the results in APA style including Assumption checks.

TASK 1

A research study was conducted to examine the effect of Facebook on perceived life satisfaction. From all university students in Prague (Nationality: 1- Slovak, 2- German) , you randomly selected subjects who had never had a Facebook account and would like to try it for 3 months (Group 1) and another random student sample from a set of active Facebook users (Group 2). The recent systematic review suggests that there is a measurement invariance in average life satisfaction norm score (when measured by the same scale as you used in your study) in Western students and equals to 3.5.

All students were given [The satisfaction with life scale](#) (Diener et al., 1985) which is a 5-item scale designed to measure global cognitive judgments of one's life satisfaction (not a measure of either positive or negative affect).

Participants indicate how much they agree or disagree with each of the 5 items using a 7-point scale that ranges from 7 strongly agree to 1 strongly disagree. For better interpretation, ***the indicator of life satisfaction is a total mean score of all five individual responses.*** The higher the total mean score, the higher the life satisfaction. ***After 3 months, you administer the same test to the same participants again.***

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- 1 – Strongly disagree
 - 2 – Disagree
 - 3 – Somewhat disagree
 - 4 – Neither agree or disagree
 - 5 – Somewhat agree
 - 6 – Agree
 - 7 – Strongly agree

Test the following research hypotheses:

H1: My sample average life satisfaction score is representative of the student population (considering Western students' norm of life satisfaction). Consider TIME 1 data.

H2: On average, Facebook users are more satisfied with life compared to Facebook non-users.

H3: On average, Group 1 students would subjectively evaluate their life as more satisfying after being exposed to Facebook for 3 months.

TASK 2

Based on throughout review of prior literature and recent epidemiological study, there is one third incidence of Facebook users compared to Facebook non-users among Slovak and German university students.

Perform an appropriate statistical test in order to find out if your sample is representative of the norm population (1/3 – Facebook users, 2/3 Facebook nonusers).

H4: The sample proportion of Facebook users vs Facebook non-users is different from the expected as per empirical evidence.

H5: There is a relationship between Facebook membership (user, non-user) and nationality (Slovak, German).

TASK 3

You want to find out whether the within subject fluctuations in life satisfaction are related to time. Perform a median split on Life satisfaction mean average Time 1 and Time 2 data. Name each created group as 1- low, 2- high. In total, you should have 4 newly created groups for Time 1 (low, high) and for Time 2 (low, high).

To determine if time had an effect on life satisfaction, test the following hypothesis:

H6: There was a relationship between levels of life satisfaction at the initial measurement and after 3 months: Proportion of participants in low Life satisfaction group differs across assessments (Time 1, Time 2)

Reference

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). Satisfaction With Life Scale. *Journal of Personality Assessment*, 49(1), 71–75.

https://doi.org/10.1207/s15327752jpa4901_13